

Appl. No. 10/605,320
Amendment dated August 27, 2004
Reply to Office Action of May 28, 2004

Remarks/Arguments:

Claims 1-2, 4, 8, 10-12 are rejected under 35 USC 102 as being anticipated by Shultz Sr. (4,211,446). The same patent is the main reference in rejections under 35 USC 103 and will be discussed here for both purposes.

The scope and teachings of Shultz Sr. appear limited to an unusual and limited situation, where a seal must be pulled from a shaft that has a large gap created between the seal and its shaft. If not for the large spacing, Shultz Sr. would be inoperative or at least impractical to pull a shaft seal. The required large spacing exists where a shaft (55) carries a removable sleeve (not shown, but described at col. 5, line 12) that can be removed to create the large spacing. The spacing is essential because Shultz Sr.'s seal puller is thick and bulky, with a triple layer hook (33, 34, 35) to pull the seal. Shultz Sr. states that such a removable sleeve is found in transmission casings. This usage appears to be technologically old, from the 1970's, and of little use as applied to modern automobiles with transverse engines.

Shultz Sr. also demonstrates a strong likelihood that it would scratch or otherwise damage the sealed shaft. Figs. 8-10 show that the Shultz Sr. seal puller is applied against the shaft (55), which poses a ready danger of damaging the shaft. Perhaps this is acceptable in the limited situation where Shultz Sr. alleges utility, if the removable sleeve is to be replaced as a seal contact surface. However, this obvious source of shaft damage again confirms that the Shultz Sr. device offers no useful teaching in the direction of Applicant's seal puller.

Applicant's seal puller solves a newer and current problem of removing conventional shaft seals, and is especially adapted for use in low-clearance situations -- between an end of an engine and an engine compartment wall -- as are presently common in transversely mounted engines. Applicant's seal puller also solves the frequent problem of a seal puller scratching the sealed shaft.

Applicant's claims refer to an "offset" hook on a seal puller. The offset disposes the hook above one major surface of the shank or blade of the seal puller. The shank or blade fits into the tight interface between a common seal and its shaft, with an opposite major face resting against the shaft. Due to its width, the opposite major face is not likely to scratch the shaft. The offset disposition of the hook places the hook into engagement with the rear face of the seal, or at least allows such engagement with minimal twisting of the shank. Thus, the seal can be pulled with minimal required rotation of the shank, such that the shaft is unlikely to be scratched.

The "offset" of Shultz Sr. does not dispose the hook above a major face of the related

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shank or blade. While the Office Action does not offer explicit detail of how Shultz Sr. provides an offset, it appears that any arguable offset feature of Shultz Sr. would be realized only with respect to a minor face of the shank or blade. All of Shultz Sr.'s hooks lie in a common plane with the major faces of the related hook shanks and are not offset with respect to a major face. Hence, Shultz Sr. does not teach equivalent positioning of the seal puller's shank and hook.

Independent claims 1 and 14 are amended to clarify the nature of the offset.

Claim 1 identifies "major" top and bottom faces of the shank. The hook is identified as opening from one of the sides, i.e., from the hook-facing side of the shank. This definition, with relative identification of major faces, clearly differentiates from any type of "offset" found in Shultz Sr.

Claim 14 identifies first and second "major" faces of a blade. The seal-engaging arm includes a free transverse end disposed above the first major face of the blade such that, in use, the blade is insertable between a shaft and a surrounding shaft seal. The second major face of the shank is disposed toward the shaft. The free transverse end of the hook is disposed above the first major face of the shank and is in a favorable position to engage behind the seal. The claimed relative positioning of the hook above a major face of the shank or blade clearly distinguishes from Shultz Sr.

Claim 3 is rejected under 35 USC 103 as obvious over Shultz Sr. The Office Action directs this rejection to choice of metal material. Claim 3 refers to "generally planar metal sheet stock," which is to be distinguished from mere metal material. The planar nature of the sheet stock is a distinguishing feature. Planar material is an advantageous choice to form a planar shank or blade structure. Claim 3 is amended by canceling "metal" as an unnecessary and evidently distracting limitation. Similarly, "sheet metal" is canceled from claim 14.

Claims 1-4, 8-11, 14-15, and 19-20 are rejected as obvious over Perea in view of Shultz Sr. Perea discloses a cotter pin extractor, which is a significantly different tool than a seal puller. Cotter pins are not mounted against shafts and their removal presents no problem equivalent to removing a shaft seal. For example, scratching a shaft is not an expected problem. More importantly, Perea shows nothing of an offset hook tip as claimed in claims 1 and 14.

Claims 12-13 are rejected as obvious over Perea and Dimakos. The latter is cited for showing a slide hammer and fulcrum. Neither slide hammers nor fulcrums individually are Applicant's invention. These are useful dependent features constituting improvements in a tool employing Applicant's novel offset hook tip as claimed in claims 1 and 14.

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In light of the above amendment, all claims appear to be in condition for allowance.
Please reconsider the prior rejections and issue a timely Notice of Allowance.

Respectfully submitted,



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